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GROUNDWATER MONITORING PROGRAM SUBCONTRACTOR

SPECIAL TASK

HEALTH AND SAFETY PLAN

Revision Level 1

Job No. GE6000VS

1. Items 1-9 to be completed by RMRS Special Task Project Manager.

Project Name CHARACTERIZATION OF THE 903 DRUM STORAGE AREA (IHSS 112),  
903 LIP AREA (IHSS 155), AND AMERICIUM ZONE

Task: This Special Task Health and Safety Plan (HASP) is only for the work to be conducted for the implementation of the Sampling Analysis Plan (SAP) (RF/RMRS-97-084) for the Characterization of the 903 Drum Storage Area (903 Pad) (IHSS 112), 903 Lip Area (Lip Area) (IHSS 155), and the Americium Zone. The sampling program proposed per the SAP is designed to further delineate and characterize the extent of radiological and VOC contamination for remedial activities. The scope of this proposed activity is limited to the collection of surface radiological data using HPGe methodology and surface soil samples for radiological analysis, collection of subsurface soil samples, using the Geoprobe or hollow-stem auger drilling methodology, for VOC and radiological analysis, and groundwater samples for VOC analysis if DNAPLs are suspected. Sample analyses and interpretation will be the responsibility of RMRS. Activities described in this Special Task HASP will be performed by or at the direction of RMRS Environmental Restoration Projects personnel.

Requested by: Mark Wood

Proposed Start-Up Date: January 1998

Project/Task No. GE6000VS

Reviewed by RMRS Health and Safety Supervisor

Printed Name M.D. Schreckengast

Signature M.D. Schreckengast Date 8-31-98

Reviewed and Approved by Radiological Engineer

Printed Name H.B. ESTABROOKS

Signature H.B. Estabrooks Date 8/31/98

Approved by RMRS Special Task Project Manager

Printed Name Mark R. Wood

Signature Mark R. Wood Date 8/31/98

Title Project Manager

Approved by RMRS Quality Assurance/Quality Control

Printed Name Greg DiGregorio

Signature Greg DiGregorio Date 8/31/98

Title RMRS Quality Engineer

Note to Project Managers: A signed and completed copy of the Health and Safety Plan and a signed and completed copy of the safety briefing must be included in the project file.

## 2. Project Description:

**Description of Non-Intrusive Activities:** Approximately 1500 HPGe measurements will be collected from the Americium Zone and possibly the Lip Area investigation areas. Each HPGe measurement will be collected from a 12 meter diameter Field of View (FOV). Follow-up FIDLER surveys may be performed to further delineate the areas with radionuclides equal to or above the RFCA Tier I action levels.

**Description of Planned Intrusive Activities:** Subsurface and surface soil sampling activities will be conducted in several phases. One phase will be the collection of approximately 15 "grab" surface soil samples from six selected HPGe locations for radiological analysis for verification and correlation to the surficial HPGe measurements per the SAP. One phase will consist of 25 soil boring locations on the 903 Pad utilizing Geoprobe drilling methodology to collect subsurface soil samples to a depth of three feet for radiological analysis and possibly volatile organic compound (VOC) analysis. One phase will consist of approximately 25 soil boring locations in the 903 Lip Area utilizing Geoprobe drilling methodology to collect subsurface soil samples to a depth of two feet for radiological analysis and possibly VOC analysis. Another phase, the VOC investigation, will consist of approximately 20 soil boring locations on the 903 Pad and the 903 Lip Area utilizing either Geoprobe or hollow-stem auger drilling methodology to collect subsurface soil samples to depths up to 28 feet for radiological and VOC analysis. Approximately 468 soil cores will be collected per the SAP. Soil core samples will be transported directly to the analytical laboratories after screening for radiological and VOC contamination and minimizing site personnel contact with potentially contaminated soils. Collection of groundwater samples with suspected DNAPLs will be performed per the SAP. Drill cuttings, if generated, will be containerized, temporarily stored in a 90-day RCRA permitted area pending analytical results, and then final disposition per FO.29. Returned environmental samples will be characterized on the basis of analytical results and process knowledge and dispositioned in accordance with FO.09 and FO.29.

## 3. Location:

This Task Specific HASP covers planned surface and subsurface soil and groundwater sampling activities to be performed for the site characterization of the 903 Pad (IHSS 112), the Lip Area (IHSS 155), and the Americium Zone, as shown in Figure 1.1. Field activities are scheduled during 1998 and 1999.

## 4. Facility/Work site Description

As shown in Figure 1.1, the work area is at the eastern edge of the industrial area and south of the East Access Road. From 1958 to 1967, the 903 Pad was used to for storing drums containing plutonium and uranium contaminated volatile organic compounds (solvents). Leaking drums resulted in contamination of the 903 Pad, the Lip Area, and the Americium Zone. Several remedial actions took place in the late 1960s and 1970s to remove hot spots and to cap the 903 Pad with eight inches of clean fill and three inches of asphalt. The Lip Area was also graded and covered with seven inches of clean fill. The 903 Pad and the Lip Area are flat lying with a gentle slope to the south and east. The Americium Zone is generally flat lying with a gentle slope to the east and a steep slope to the south on the south side (Figure 1.1).

## 5. Proposed Personnel and Tasks:

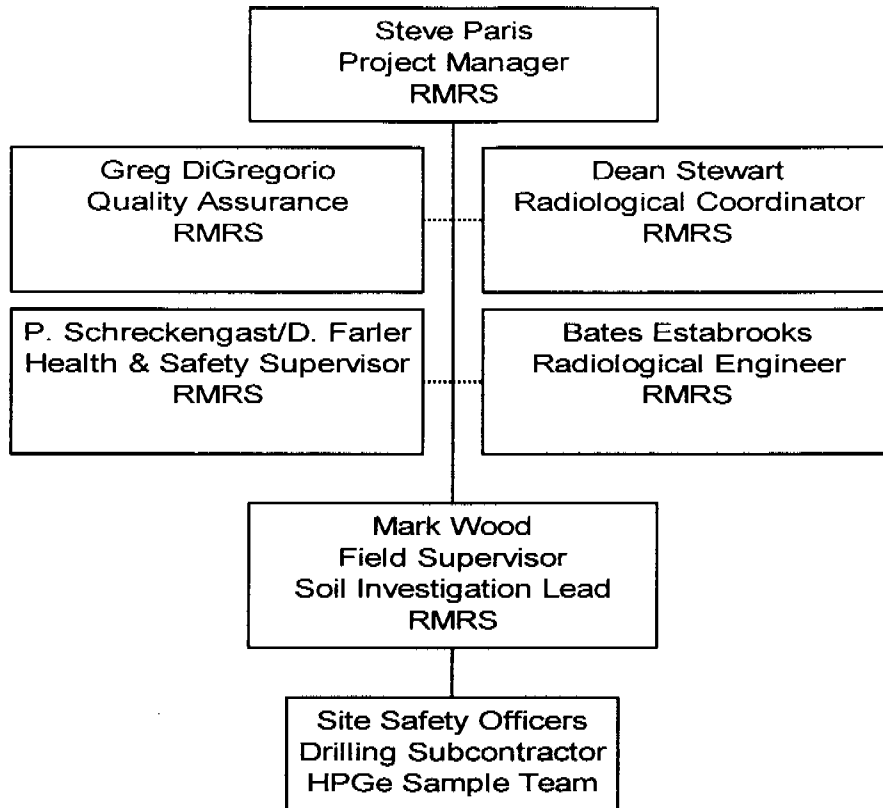
Figure 1.2 shows the project organization chart and project responsibilities.

Project Manager: Steve Paris

Field Supervisor/Team Leader - Soil Investigations: Mark Wood

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**Figure 1.2**  
**903 Pad, 903 Lip Area, and Americium Zone**  
**Organizational Chart**



**Proposed Field Team**

**Job Function/Tasks**

Steve Paris	RMRS Project Manager
Mark Wood	RMRS Field Supervisor/Team Lead/assist with soil inv. tasks
Harold Sanchez, Ron Blea	Subcontractor Health and Safety Officer/Health and Safety Specialist
J. Boylin/T. Lutherer	Subcontractor Geologist/logging and sampling
Rick Gentry	RMRS HPGe Data Coordinator/assist with HPGe data collection
B. Simmons/C. Lucero/M. MacKenzie/Mvaugn/P. Christmas/L. Hardin	Project RCTs, Rad control
G. Stretesky/R. Michaels	Subcontractor Geoprobe operator
Ralph Rupp	Subcontractor Geologist/logging and sampling
L. Booth/L. Umbaugh	Canberra Project Manager and Gamma Spectrometry Specialist
Rebecca Mitchell	Canberra Industrial Hygiene Specialist
Paul Wojtaszek	Canberra Gamma Spectrometry Specialist
Todd Shipley	Canberra Gamma Spectrometry Specialist
Bates Estabrooks	RMRS Radiological Engineering

6. Confined Space Entry

A confined space is defined as: 1) large enough to enter; 2) limited access/egress; and 3) not intended for human occupancy. (CFR 1910.146[b]). A permit required confined space also may pose additional hazards such as: toxic contaminants, a flammable or oxygen deficient atmosphere, or other hazards, such as engulfment, or electrical or mechanical hazards should equipment be inadvertently activated while an employee is in the confined space. Confined spaces include but are not limited to storage tanks, process vessels, bins, boilers, ventilation or exhaust ducts, air pollution control devices, smoke stacks, underground utility vaults, sewers, septic tanks, and open top spaces more than four feet in depth such as test pits, waste disposal trenches, sumps and vats.

Will this task require entry into any confined or partially confined space?

YES - Describe below  
☒ NO

7. Cutting and Welding

Will this task involve use of a cutting torch or welding?

YES - Describe below  
☒ NO

8. Other Potential Hazards

☒ Chemical  
☒ Radiological  
☐ Fire/Explosion  
☒ Heat/Cold Stress  
☐ Electrical  
☒ Machinery/Mechanical Equipment

☒ Trips, Slips, Falls  
☐ Trenching/Shoring  
☐ Heavy Equipment/Vehicular Traffic  
☐ Overhead Hazards  
☒ Unstable/Uneven Terrain  
☐ Other - Describe below

# 16. Personal Protective Equipment

<u>Location</u>	<u>Job Function/Task</u>	<u>Initial level of Protection</u>						
903 Pad/903 Lip Area	Subsurface soil sampling							
Exclusion Zone	<u>Mod. Level D protection unless</u>	B	C	<u>D</u>	1	2	3	OTHER
(Contamination Area	<u>the RWP has more stringent</u>	B	C	D	1	2	3	OTHER
or High Contamination Area)	<u>requirements</u>	B	C	D	1	2	3	OTHER
Contamination Reduction Zone	<u>Level D protection unless</u>		B	C	<u>D</u>	1	2	3
OTHER								
(Radiological Buffer Area)	<u>the RWP has more stringent</u>	B	C	D	1	2	3	OTHER
	<u>requirements</u>	B	C	D	1	2	3	OTHER
<u>Location</u>	<u>Job Function/Task</u>	<u>Initial level of Protection</u>						
Americium Zone	HPGe/FIDLER surveys and surface soil sampling							
Exclusion Zone	<u>Level D protection unless</u>		B	C	<u>D</u>	1	2	3
OTHER								
(Contamination Area or	<u>the RWP has more stringent</u>	B	C	D	1	2	3	OTHER
High Contamination Area)	<u>requirements</u>	B	C	D	1	2	3	OTHER
Contamination Reduction Zone	<u>Level D protection unless</u>		B	C	<u>D</u>	1	2	3
OTHER								
(Radiological Buffer Area)	<u>the RWP has more stringent</u>	B	C	D	1	2	3	OTHER
	<u>requirements</u>	B	C	D	1	2	3	OTHER

List the specific protective equipment and material (where applicable) for each of the levels of protection identified above.

## Level B

- \_\_\_ Pressure demand airline with escape provisions
- \_\_\_ Pressure demand SCBA

## Level C (includes all Mod Level D req.)

- \_\_\_ Half face air purifying respirator
- \_\_\_ Full face air purifying respirator
- \_\_\_ Full face canister air purifying respirator
- \_\_\_ Inner latex gloves
- \_\_\_ Outer NBR gloves

## Level Mod D

- X Standard work clothes/DOE coveralls
- X Hard hat, steel-toed boots, safety glasses
- X Ear protection during drill rig hammering operation
- X Inner nitrile gloves (2 pair)
- \_\_\_ Outer Nitrile Butyl Rubber (NBR) gloves (follow RWP)
- \_\_\_ Outer Nitrile Butyl Rubber (NBR) booties (follow RWP)

## Level D

- X Standard work clothes/DOE coveralls
- X Hard hat, steel-toed boots, safety glasses
- X Ear protection during drilling hammering operation
- X Outer NBR booties (follow RWP)

Note: Hard hat to be worn when within five feet of Geoprobe operation or 50 feet of hollow-stem auger operation, or if overhead hazards are present. Orange traffic vests required when moving drill rig.

Where air purifying respirators authorized, GMC-H are the appropriate canisters/ cartridges for use with the specific substances and concentrations anticipated. Cartridges will be replaced at the start of each work day.

NO CHANGES TO THE SPECIFIED LEVELS OF PROTECTION SHALL BE MADE WITHOUT THE KNOWLEDGE AND APPROVAL OF THE HEALTH AND SAFETY OFFICER AND THE PROJECT MANAGER.

17. Decontamination

Personnel and equipment leaving the Exclusion Zone/Contamination Area or High Contamination Area will proceed through the decontamination procedures in the contamination reduction zone (Radiological Buffer Area) in accordance with Section 6.5.2.1, Radiological Areas - Step-off Pad Requirements and the task specific RWP:

Emergency decontamination procedures:

18. Confined Entry Procedures X Not Applicable

Yes N/A

Yes N/A

\_\_\_ Provide Forced Ventilation

\_\_\_ Refer to Personal Protection Equip. (#16)

\_\_\_ Test Atmosphere for:

\_\_\_ Refer to Emergency Procedures. (#29)

\_\_\_ (a) %O<sub>2</sub>

\_\_\_ Other Special Procedures

\_\_\_ (b) %LEL

\_\_\_ © Other

Descriptions/Other:

19. Cutting/Welding

Yes N/A

X Not Applicable

\_\_\_ Relocate or protect combustibles

\_\_\_ Wet down or cover combustible floor

\_\_\_ Check flammable gas concentrations (%LEL) in air

\_\_\_ Cover wall, floor, duct and tank openings

\_\_\_ Provide fire extinguisher

Other Special Instructions:

20. Onsite Organization and Coordination

Project Manager: Steve Paris

Field Team Leader/Field Supervisor - Soil Inv.: Mark Wood

Health & Safety Supervisor: Dave Farler/ Peggy Schreckengast

**Field Team Members**

**Job Function/ Health and Safety Tasks**

Steve Paris/Mark Wood RMRS Project Management responsible for implementation of HASP

Harold Sanchez Subcontractor Health and Safety Officer/Health and Safety Specialist responsible for implementation of HASP

Ron Blea Subcontractor Health and Safety Officer/Health and Safety Specialist responsible for implementation of HASP

Rebecca Mitchell Subcontractor Health and Safety Officer responsible for implementation of HASP

Bates Estabrooks RMRS Radiological Engineering responsible for work conducted in accordance with ALARA Job Review, Task-specific RWP, property release evaluations, and Radiological Control Manual

Chip Sawyer Radiological Operations foreman, review surveys, reviews and signs RWPs, point of contact for RCT support

21. Special Instructions: